Washington State Department of Transportation

PHASE 4: Walla Walla to Wallula Planning Study

Four-laning US Highway 12

Corridor Considerations

In accordance with design processes required by the National Environmental Policy Act, the corridor analysis between Walla Walla and Wallula will include an evaluation of the following social, economic, environmental, and engineering considerations.*

- Wetlands
- Business/Public Access
- Fish Habitat
- Wildlife Habitat
- Cultural, Historic, and Archaeological Sites
- Land Use Constraints
- Prime and Unique Land Use
- Air Quality
- Residence, Business, and Farmland Impacts
- Minority and Low Income Communities
- Hazardous Materials
- Safety
- Highway Speed
- Design Standards and Regulations
- Coordination with Federal, State, and Local Agencies
- Noise Levels
- Impacts to Services, Energy, and Utilities
- Visual Impacts
- Geology, Soils, and Slope Stability
- Terrain and Geographical Features
- Drainage
- Bridge Type, Placement, and Length
- Water Resource
- Intersection/Interchange Locations and Configurations
- Traffic Control and Construction Staging
- Available Funding and Project Cost

* *Note: Considerations are not listed in order of priority*

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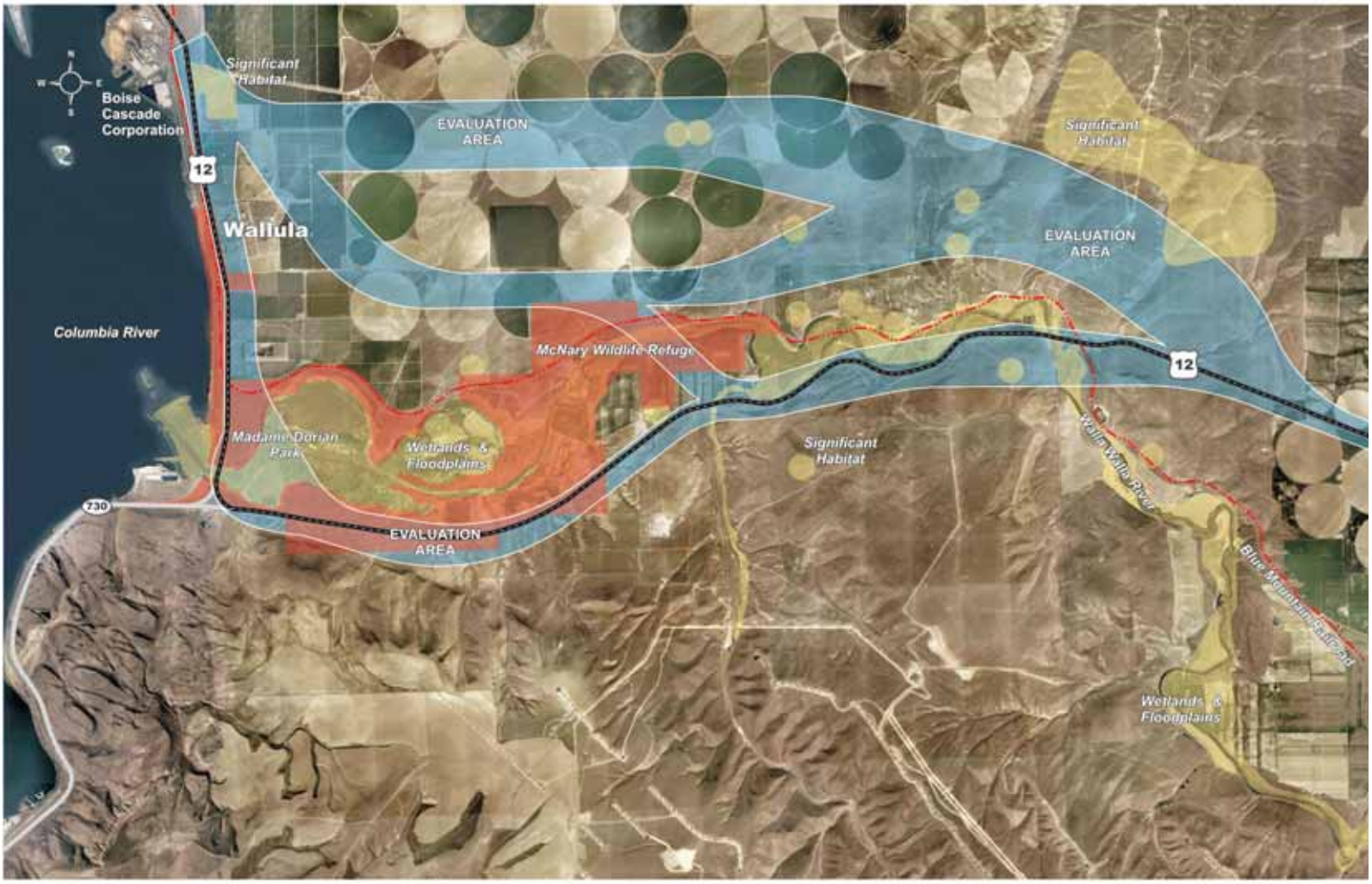
PHASE 4: Wallula to Walla Walla Planning Study

Four-laning US Highway 12



What is the purpose of this study?

The Wallula to Walla Walla Planning Study will develop recommendations for the location of an improved four-lane divided highway. Simply widening US 12 in its current location could negatively impact existing businesses, farms, communities, historical sites, and wildlife habitat.

What will the study accomplish?

- Identify social, economic, environmental, engineering, and financial constraints
- Determine acceptable locations and preferred route alternatives
- Develop preliminary project schedules and cost estimates for phases 5, 6, 7, and 8

What section will be constructed first?

The planning study first focused on the area from McDonald Road to Walla Walla (Phase 6) because it is the most congested section. Due to urban growth, impacts to developed property would increase if highway construction was delayed.

IT'S YOUR NICKEL. WATCH IT WORK.

This project is funded in part by the 2003 Legislative Transportation Funding Package. The main source of funding is a 5¢ increase in the gas tax. The package also includes an increase in the large truck gross weight fee and a 0.3 percent vehicle sales tax.

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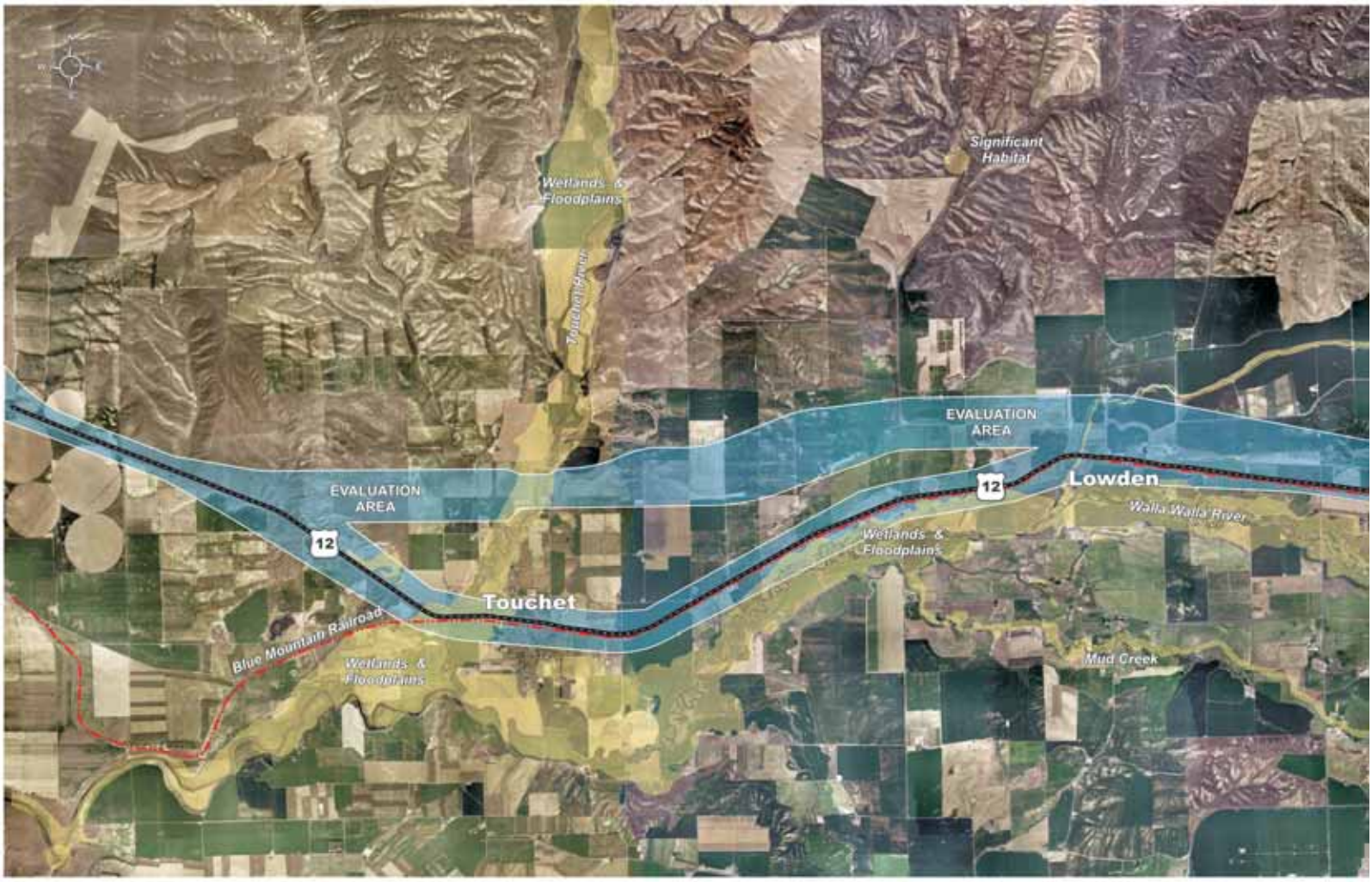
PHASE 4: Wallula to Walla Walla Planning Study

Four-laning US Highway 12



What has been done already?

A footprint study was completed for the section of US 12 between the US 12/SR 730 intersection and Walla Walla. The study recommended a new highway be constructed north of existing US 12 highway based on the following criteria:

- Environmental Impacts
- Right of way and access changes
- Accident history and traffic analysis
- Engineering feasibility

What are the advantages of building to the north?

- Avoids widening the existing alignment or constructing a new alignment through the McNary National Wildlife Refuge
- Avoids impacts to Madame Dorian Park
- Avoids impacts to the Walla Walla River and associated sensitive wetlands and riparian areas
- Avoids areas of known or likely Native American campsites adjacent to the Walla Walla River

Currently Identified Areas of Concern

Areas That Should Be Avoided
This includes the McNary Wildlife Refuge, wind turbines, historical sites, and landfills. Environmental regulations and economic considerations require that these areas be avoided unless no other reasonable alternative exists.

Areas That Should Be Avoided
Relative areas are wetlands, floodplains, and significant habitat. Going through these areas would require actions to reduce or eliminate negative impacts, resulting in significantly increased project costs.

Evaluation Areas
These areas are being evaluated in-depth. Based on current information, the new highway will likely be located somewhere within these bands unless something critical is discovered.

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PHASE 4: Wallula to Walla Walla Planning Study

Four-laning US Highway 12

Project Timeline

Initial Planning
Get a general idea of what needs to be done and how much it will cost

- 1998 and 2002 Included in the Highway Systems Plans
- August 2001 Footprint Report - Wallula to Walla Walla

Securing Funding
Generate support and funding

- August 2001 Formed US 12 Coalition
- July 2003 Received Nickel Package

Environmental Compliance
Ensure that environmental statutes and regulations are followed

- January 2004 Field investigation started
- August 2004 Environmental studies scheduled completion in June 2007

Public Hearings and Open Houses
WSDOT present ideas, answer questions, and listen to public

- March 2004 Open Houses in Burbank and Walla Walla
- Open House in Burbank and Walla Walla in May 2005

1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

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How does a roundabout work?

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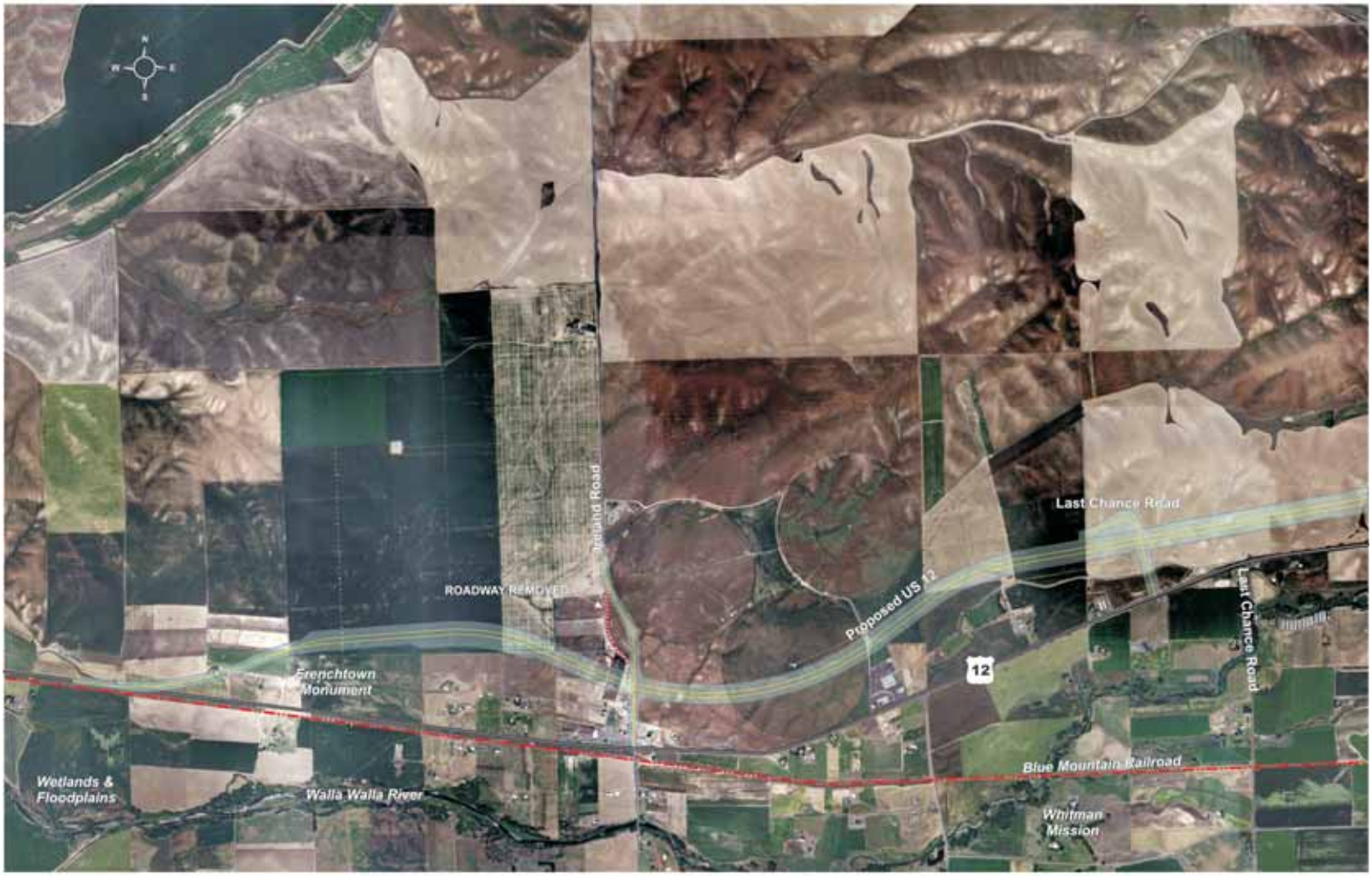
PHASE 6: McDonald Road to Walla Walla

Four-laning US Highway 12



Purpose

Improve safety, decrease congestion, and enhance economic vitality

Project Description

Reconstruct US 12 as a four-lane divided highway

Project Cost Estimate

Total: $49.2 million

(This estimate includes engineering, right of way, and construction costs.)

Construction Timeline

Start: Early 2008
Finish: Fall 2009

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2005 TRANSPORTATION PARTNERSHIPS PROJECTS

This project is funded in part by the 2005 Transportation Partnership Funding Package. The main source of funding is a 9.5¢ increase in the gas tax, phased in over four years. The package also includes a new vehicle weight fee and increases in other license fees and charges.

Safety Features

- Limit cross traffic by reducing the number of intersections and private access points
- Provide intersections at Ireland Road, Last Chance Road, and Sudbury Road
- Provide an interchange at Pine Street

Traffic Impacts

- Traffic delays are expected to be minor during the construction of this project
  - Existing US 12 will remain open during most of the construction
  - There may be lane closures for work at intersections
  - Periodically, brief delays are expected to occur as construction vehicles enter and leave the work area

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PHASE 6: McDonald Road to Walla Walla

Four-laning US Highway 12

Project Timeline

Initial Planning
Get a general idea of what needs to be done and how much it will cost
- August 2001 the US 12 Highway Coalition was formed
- August 2001 Footprint Study - Wallula to Walla Walla

Securing Funding
Generate support and funding
- May 2005 Construction funding through Transportation Partnership Funding Package

Project Design
Thoroughly evaluate the problem and engineer a detailed solution

Environmental Compliance
Ensure that environmental statutes and regulations are followed

Public Hearings and Open Houses
WSDOT designers present ideas, answer questions, and listen to public input
- August 2001 Feasibility Study
- March 2004 Burbank and Walla Walla Open Houses
- December 2004 Access Hearing
- May 2005 Burbank and Walla Walla Open Houses

Real Estate Acquisition
Determine project area needs and purchase property for new roadways

Contract Preparation
Prepare plans to tell contractor what to build

Project Construction
Private Contractors bid/build the project As designed by WSDOT

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011

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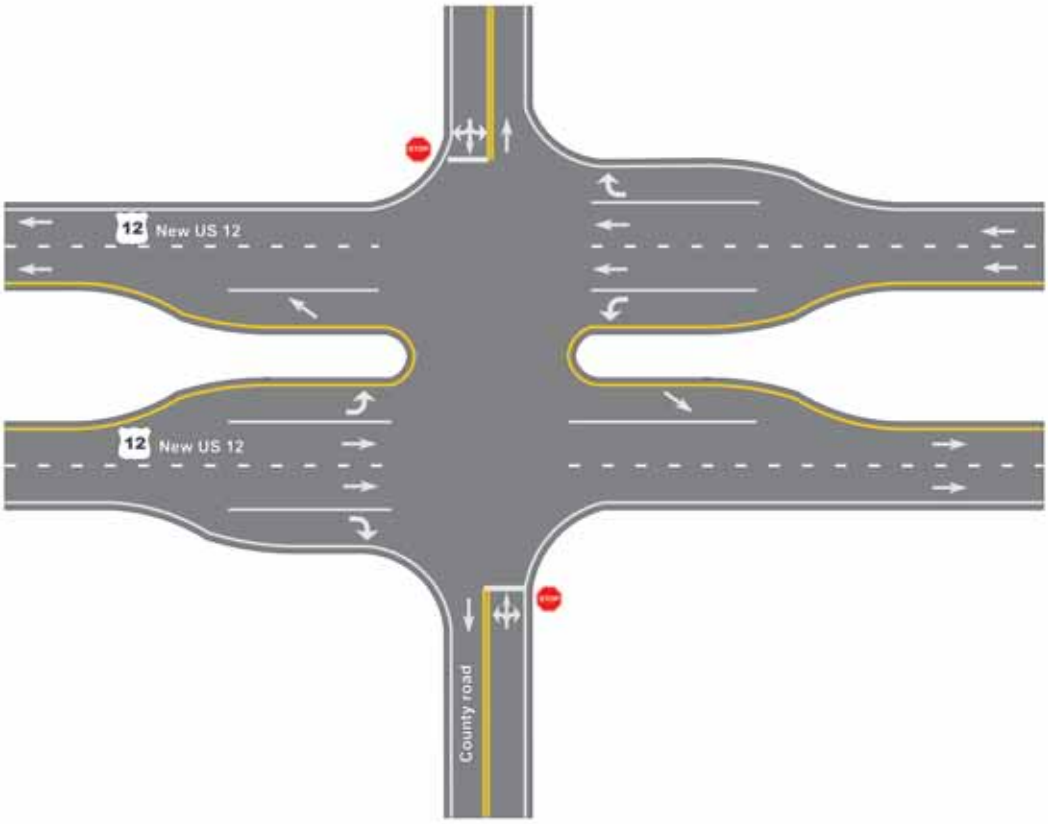
PHASE 6: McDonald Road to Walla Walla

Four-laning US Highway 12



Proposed Intersection Design: Ireland Road, Last Chance Road, and Sudbury Road

- Stop signs on county road
- Acceleration lanes on US 12 for vehicles turning left from county road
- Left-turn and right-turn lanes on US 12 for vehicles turning onto county road

Ireland Road

Last Chance Road

Sudbury Road

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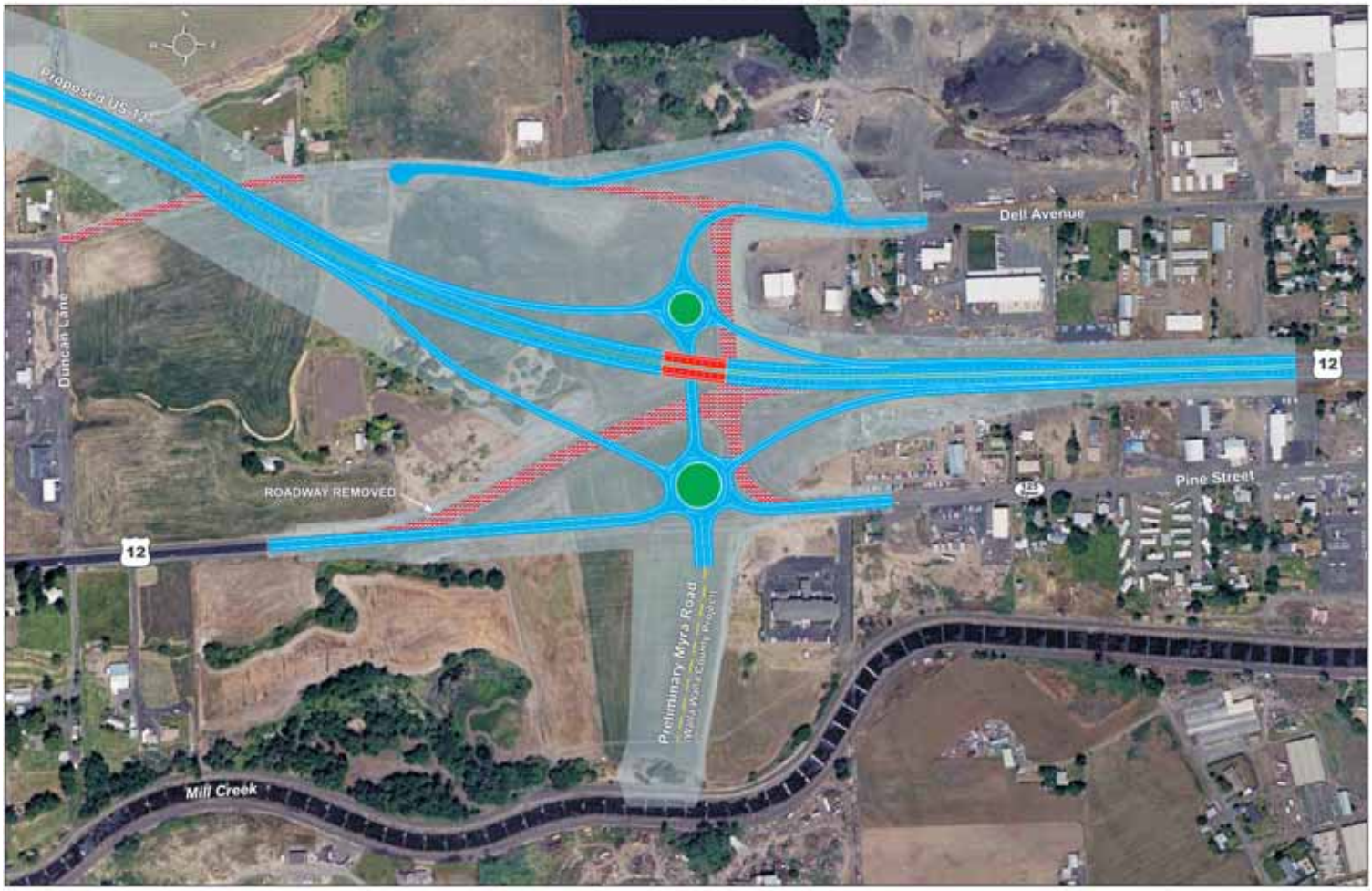
PHASE 6: McDonald Road to Walla Walla

Four-laning US Highway 12



Preferred Option: Pine Street Interchange

Modified Diamond Interchange

- Roundabouts create efficient and safe movements for vehicles.
- This design allows for future road expansion and development north of Dell Avenue.
- The interchange will accommodate for added traffic from Future Myra Road (Walla Walla County Project).

Other Options Considered

Single Point Urban Interchange (SPUI)

- The SPUI design would not be efficient for traffic patterns at this location.
- This option would have higher construction costs.

Partial Clover Leaf Interchange (PARCLO)

- Traffic speeds on the loop ramp would be only 30 mph.
- This design would limit future road expansion north of Dell Avenue.

South Central Region

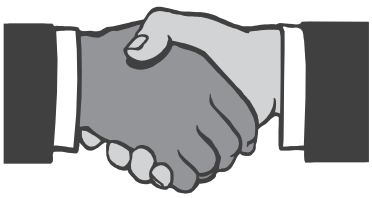
Real Estate Acquisition Summary

Engineering creates the right of way plan sheets that show the areas needed to build the highway project. Real Estate Services has the responsibility to acquire the needed property and assure the acquisitions are accomplished within the law. Eminent domain laws require the government to pay just compensation for the property needed for public uses. The steps in the acquisition process are as follows:

- Real estate appraisers will determine the market value of the property. The appraiser will:
  - Contact you for a joint inspection.
  - Research sales of similar property in the market area.
  - Value the property before and after the project.
  - Determine the damages or special benefits.
  - Some parcels with minor acquisitions will be valued administratively using the appraiser's sales research. You have the right to request an appraisal on this administrative value.
- A review appraiser checks the appraiser's work and issues a 'Determination of Value' which is the just compensation that will be offered to you.
- An acquisition Agent will contact you with the offer to purchase. You will be informed whether an appraisal or an administrative value is being used. The Acquisition Agent will:
  - Explain the project and its impacts to your property.
  - Explain your rights under the eminent domain law.
  - Listen to your concerns and, if necessary, convey them to engineering or appraisal for review.
  - Discuss the acquisition with your professional advisors (appraisers, real estate agents, lawyers, etc.).
  - Provide all the documents necessary to acquire the property for the project.
  - Submit the signed documents to headquarters for payment processing. Payments are processed within 45 days of signature.
  - If the acquisition Agent is unable to reach an agreement with you, we refer the acquisition to the Attorney General to begin condemnation proceedings. Condemnation is a legal action to acquire the property for the project after the state has been unsuccessful in reaching agreement with the property owner.
- If a residence or business is acquired by the state, you or your tenant may be entitled to relocation entitlements. A relocation agent will:
  - Explain the relocation entitlements available to you under eminent domain laws.
  - Assist you in locating replacement housing.
  - Assist you in the move of your personal property.
  - Assist your business in re-establishing at its new location.
  - Assist tenants in locating replacement housing.

Three brochures, ***Transportation Property Needs and You, Residential Relocation Assistance Program,*** and ***Business/Farm Relocation Assistance Program*** are published by the Department of Transportation. These booklets provide more detail into the acquisition and relocation processes. You may request a copy by contacting:

Washington State Department of Transportation
South Central Region – Real Estate Services
PO Box 12560
Yakima WA 98909-2560
(509) 577-1650



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US 12/SR 124 Burbank Interchange

Purpose

Improve safety, decrease congestion, and enhance economic vitality

Project Description

Construct an interchange at the junction of US 12 and SR 124 and bridge US 12 with Humorist Road

This is what we heard at last year's open houses.

- A majority of citizens felt that an interchange at the existing SR 124 intersection is needed.
- A majority of citizens also felt that this corridor of US 12 needs safety improvements.
- A majority of people who wanted the interchange preferred options A and C (Diamond and PARCLO designs).
- A majority of people felt that SR 124 should bridge over US 12.

Why only one interchange in the Burbank area?

- Projected traffic does not warrant two interchanges
- Fewer access points create a safer highway
- Humorist Road will bridge over US 12

Where do we go from here?

The next step is to select a preferred alternative. The preliminary interchange concepts will be evaluated based on engineering, social, economic, and environmental considerations.

Project Funding

The 2005 Transportation Partnership Funding Package provided $20.0 million for design and construction of the US 12/SR 124 Burbank Interchange.

Project Timeline

Initial Planning
Get a general idea of what needs to be done and how much it will cost
- 1993 WSDOT planning study
- 2004 WSDOT refines planning study

Securing Funding
Generate support and obtain project funding
- March 2003 US Highway 12 Coalition secured funding for the interchange study
- May 2005 Design and Construction funding through Transportation Partnership Funding Package

Project Design
Thoroughly evaluate the problem and engineer a detailed solution
- April 2005 Value Engineering Study (VE Study)

Environmental Compliance
Ensure that all environmental statutes and regulations are followed

Public Hearings and Open Houses
Opportunities for WSDOT designers to present their ideas, answer questions, and listen to public input
- March 2004 Burbank and Walla Walla Open Houses
- May 2005 Burbank and Walla Walla Open Houses

Real Estate Acquisition
Determine project area needs and purchase property for new roadways

Contract Preparation
Prepare a detailed set of plans to tell the contractor what to build

Project Construction
Private contractors bid for and build the project as designed by WSDOT

1993 ▪ ▪ ▪ 2003 2004 2005 2006 2007 2008 2009 2010 2011

"Washington's Future Just Got Better"

MAKING EVERY DOLLAR COUNT.

2005 TRANSPORTATION PARTNERSHIPS PROJECTS

This project is funded in part by the 2005 Transportation Partnership Funding Package. The main source of funding is a 9.5¢ increase in the gas tax, phased in over four years. The package also includes a new vehicle weight fee and increases in other license fees and charges.

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US 12/SR 124 Burbank Interchange

Preliminary Concept A

Example of a Diamond Interchange

This is a diamond interchange, which is the most common interchange type in the United States. It is a simple and widely recognized design.

Estimated cost: $16–19 million
(This estimate includes engineering, right of way, and construction costs.)

Features:

- SR 124 crosses over US 12.
- Traffic signals should not be required initially, but could be added at the ramp intersections on SR 124 as traffic volumes increase in the future.
- Compared to the other three concepts, the diamond interchange has the greatest impact on the McNary Wildlife Refuge.

Preliminary Concept C

Example of a PARCLO Interchange

This is a partial cloverleaf interchange (PARCLO), which is similar to a diamond interchange, except that the eastbound off-ramp is a loop.

Estimated cost: $15–18 million
(This estimate includes engineering, right of way, and construction costs.)

Features:

- SR 124 crosses over US 12.
- The loop ramp requires more land in the southwest quadrant.
- The major traffic movement from eastbound US 12 to eastbound SR 124 has a right turn onto SR 124.
- Proximity of the eastbound ramp intersections on SR 124 could lead to driver confusion and wrong-way movements.
- Traffic signals should not be required initially, but could be added at the ramp intersections on SR 124 as traffic volumes increase in the future.

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US 12/SR 124 Burbank Interchange

Preliminary Concept E

This is a partial cloverleaf interchange, which is similar to a diamond interchange, except that the eastbound off-ramp is a loop.

Estimated cost: $15–18 million
(This estimate includes engineering, right of way, and construction costs.)

Features:

- SR 124 crosses over US 12.
- The loop ramp requires more land in the southwest quadrant.
- The major traffic movement from eastbound US 12 to eastbound SR 124 has a right turn onto SR 124.
- Proximity of the eastbound ramp intersections on SR 124 could lead to driver confusion and wrong-way movements.
- Traffic signals should not be required initially, but could be added at the ramp intersections on SR 124 as traffic volumes increase in the future.
- This design will avoid impacts to Hood Park.
- Compared to Concept C or F, this option will have greater impact on the McNary Wildlife Refuge.

Preliminary Concept F

This design is similar to a partial cloverleaf interchange, except that the frontage road to parallel US 12.

Estimated cost: $15–18 million
(This estimate includes engineering, right of way, and construction costs.)

Features:

- SR 124 crosses over US 12.
- The interchange requires more land than the diamond interchange.
- This configuration allows for better land development on the southwest side of US 12 than Concept C or E.
- This design allows smoother traffic flow from the Burbank area to US 12 than Concept C or E.
- Proximity of the eastbound ramp intersections on SR 124 could lead to driver confusion and wrong-way movements.
- Traffic signals should not be required initially, but could be added at the ramp intersections on SR 124 as traffic volumes increase in the future.

From Weeds to Grass
Integrated Vegetation Management (IVM)

Our vision is an IVM program that encourages desirable native grasses and plants to grow in enough abundance to choke out undesirable plants. We will control targeted noxious or nuisance weeds with minimal use of herbicides and some mechanical control.

IVM is a proactive approach to roadside management. Traditionally, herbicide has been used to kill noxious and nuisance weeds, but there was generally nothing done to prevent the weeds from returning. IVM takes the next step and includes actively promoting the growth of desirable vegetation to make it difficult for unwanted plants to re-establish.

The IVM approach focuses on using long-term solutions to establish stable, low-maintenance roadside plant communities compatible with highway safety, maintenance objectives, neighbors' concerns, and environmental quality, while at the same time deterring invasion of undesirable plants. Over time, this practice will reduce habitat for undesirable vegetation on the roadsides which will reduce maintenance requirements and cost.

Success Story – IVM in Action

This 13 acre area of undeveloped WSDOT right of way was overgrown with a thriving population of Scotch Thistle and other noxious weeds. Initially, the weeds were controlled by applying herbicide several times each year. This method kept the weeds down for a short time, but they always returned – it was a never ending battle.

Three years ago, the strategy was changed in hope of achieving a long-term solution. The plan was to seed the area with desirable vegetation that would take over the area and prevent the noxious weeds from returning. Based on the soil conditions and local climate, native grasses were selected for planting. A final round of herbicide was applied to clear the area. The land was then cultivated, fertilized, packed, and seeded. One year after planting, the grass had taken hold and the noxious weeds did not return.

For the last three years, the only maintenance required on the area has been occasional spot spraying for small outcroppings of noxious weeds. Grasses will be fertilized as needed to maintain strong growth. Fertilizer also works as an aid to force out undesirable vegetation.

IVM Benefits

The use of an IVM approach for roadside vegetation management fits well with the goals of WSDOT. Ultimately, a successful IVM program will allow state highway maintenance forces to better achieve the identified maintenance objectives:

- Provide safe, reliable transportation
- Maintain investment, lower life cycle costs
- Support commerce and economic vitality
- Comply with legal mandates
- Be a responsible member of the community
- Be environmentally responsible
- Contribute to a positive appearance

Examples of IVM Benefits

Creating a More Natural Environment

Bringing the roadside back to a more natural condition has many advantages:

- It requires little or no herbicide use.
- It takes a relatively short time for plants to establish.
- It is more appealing and attractive.
- It is cost effective – saving dollars.
- It is better for the environment!

Cleaning Water

Grass lined ditches act as filters that clean silt from the water before it reaches rivers and streams.

Stabilizing Slopes

Mulch and grass seed are applied to slopes to help stop erosion.

Well established grass areas stabilize slopes to prevent erosion and choke out weeds.

Improving Visibility

Tall undesirable vegetation must be mowed to create more sight distance.

Planting shorter grasses provides clear visibility without mowing.

IVM Strategies

Prevention of problem vegetation (establishment of desirable vegetation)

This approach focuses on understanding the requirements for plant survival. The goal is to improve conditions for preferred vegetation, while reducing conditions for undesirable plants. By occupying all growing space at a site, healthy, relatively stable plant communities resist invasion and deny undesirable plants access to nutrients, water, light, and other resources required for survival.

Prevention strategies include:

- Promoting existing populations of native plants
- Planting desirable vegetation
- Grading and altering soil conditions to favor desirable vegetation
- Planting mixtures of vegetation
- Accommodating compatible wildlife
- Education and regulations to prevent the spread of noxious weeds

Suppression of problem vegetation (weed control)

Suppression strategies involve direct control actions targeting problem species. To produce long-term solutions and reduce costs, suppression controls must be combined with monitoring activities and methods that prevent weeds from returning.

Suppression strategies include:

- Chemical controls: herbicides
- Mechanical controls: mowing, cutting, grading, disking
- Manual controls: hand pulling and grubbing, cutting trees and shrubs
- Biological controls: deploying insects and microorganisms that target weeds
- Physical controls: weed barriers and burning

Examples of IVM Strategies

Herbicide Application

A minimal amount of herbicide is applied to control small patches of noxious or nuisance weeds.

Hydro seeding

Inaccessible areas, such as slopes and ditches, are sprayed with mulch and grass seed. The mulch protects against wind and water erosion until the grass is established.

Fertilizer Application

Liquid fertilizer is custom blended to apply the exact type and amount of nutrients needed to ensure healthy grass development.

Fertilizer

Effective use of fertilizer is key to the success of an IVM program. Proper use of fertilizer helps the grass to establish quickly so that undesirable weeds do not have a chance to take hold. Liquid fertilizer has several benefits over the granular form. It is more flexible and can be applied more quickly with fewer resources.

Liquid vs. Granular

Liquid fertilizer mixes are flexible

Liquid fertilizer can be custom ordered in the exact proportions needed for the soil conditions. Keeping fertilizer to a minimum reduces the risk of damage caused by runoff into fish bearing streams and rivers.

Dry fertilizer is pre-mixed and may not be available in the proportions needed for a particular soil. To get the right amount of one nutrient, the mix may supply too much of another. Custom mixes are usually an additional cost and are sometimes only offered in large quantities.

Liquid fertilizer is fast acting

Liquid fertilizer acts quickly because it is absorbed through the leaves of the plant as well as through the roots.

Dry fertilizer is absorbed only through the roots. It must soak into the ground before the plant can access the nutrients.

Liquid fertilizer application time is flexible

Liquid fertilizer can be applied in the rain or during dry weather.

Dry fertilizer is typically applied from an open truck. Because of this, it cannot be applied in the rain. However, rain is needed to activate the dry fertilizer, so the application must be timed to occur just before, but not during, a rainstorm.

Liquid fertilizer application requires few resources

Liquid fertilizer can be applied quickly with minimum resources. Application involves one spray truck, possibly a truck mounted attenuator (TMA), and 1–2 employees. The operation typically proceeds at a speed of 18 mph.

Applying dry fertilizer is a much slower and more resource heavy process. It could involve up to 5 vehicles (fertilizer truck, compressor truck, buffer vehicle, TMA, and nurse truck with extra supplies) and 5–6 employees. The typical application speed is 1–2 mph.

Liquid fertilizer can have immediate and long-term effects

Liquid fertilizer can be used in a slow release formula to provide immediate and extended benefits with only one application.

Dry fertilizer is also available in a slow release version, but it is not as effective. By the time the ingredients are activated, they may have leached far into the soil (depending on soil type) to be out of reach of the plant.

For more information contact
Steve Underwood
WSDOT South Central Region – Maintenance Area 4
529 W Main
Dayton, WA 99328
Phone: 509-382-2440
E-mail: underws@wsdot.wa.gov

Washington State
Department of Transportation